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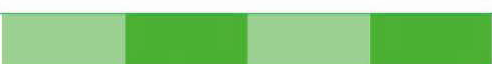
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**ORIGlf\JAL ARTICLE**

**EVALUATION OF MENTAL HEALTH OF STUDENTS RELATED TO MEDICAL FIELDS IN QUETTA, PAKISTAN: A CROSSECTIONAL STUDY**

## ABSTRACT



**OBJECTIVE**

To determine the mental health profile of students related to medical feilds in Quetta, Pakistan.

## STUDY DESIGN

A questionnaire-based,cross-sectional study

## PLACE AND DURATION OF STUDY

The study was carried out from January to September 2014 in Bolan medical college, Nursing school and University ofBalochistan Quetta.

## SUBJECTS AND METHODS

A total of 614 students of MBBS & BOS, BSN and Pharm-D Programs were enrolled. To assess mental health Self Reporting Questionnaire (SRQ-20) developed by WHO was used. Descriptive statistics were used to demonstrate participant's demographic characteristics. Inferential statistics(Chi-square test, p<0.05) was used to

assess the statistical significance among study variables

## RESULTS

Overall 58.3% scored above the cut off level, so considered to have poor mental health. Results demonstrated that female students are more prone to poor mental health as 62.4% female students have poor mental health. Significant difference was calculated by chi-square test, which showed there was no significant difference between alldemographicsand mentalhealth.

## CONCLUSION

This study presented compromised mentalhealth profile of students related to medical fields in Quetta. Moreover, these findings may serve as a stimulus for future studies to identify the factors that may contribute to poor mental health and for developing a program for minimizing the effect of those factors to improve the mental health for achieving optimal patient outcomes.

## KEYWORDS

Mentalhealth, Students, Mental illness

## INTRODUCTION

Mental health is a process of perceiving the world and how an individual controlimportant eventsin their lives'.Mental illnessinvolvesthe disorders of mood, behavior and thought process which may be due to psychological or biological pathology or due to some external factors'. An individual'shealth is a state of complete physical, mental and social well-being which allows people to lead a productivelife' which indicatesthat there is no health without mental health'. Factors external mainly Medical colleges and universities are well known to enforce such factors that contribute in the disturbance of mentalhealth of medicalstudents'·8•

Through an extensive literature review regarding thementalhealth of medical students in Pakistan, poor mental health was reported in many studies conducted in some medical colleges of Pakistan•·". Factorsthat contribute to poor mental health of health professionals could be responsible for negative effect on patient care there for they should be recognized and eliminated to improve students' mentalhealth".

There is no published study up till now regarding to the assessment of mental health of students related to medical fields in Quetta, so bearing thisin mind this study is intended to evaluate the mental health of students related to medical fields which includes students of MBBS, BOS, Pharm-D and BSN in Quetta Pakistan.This study may contribute in recognizing factors for students' mental health and for developing any program for minimizing the effect of those factors on student's mental health to improve their mental health for achieving optimalpatient outcomes.

## SUBJECTS AND METHODS

The study was designed as a questionnaire-based,cross-sectional analysis;the STROBE guideline was used to illustrate thedata". Questionnaire based study was selected because this is most convenient, most cost effective and least time consuming method to evaluate the overall mental health. 800 students were chosen randomly to be included in the sample. MBBS and BOS students were chosen from Bolan medical college, Quetta, Pharm-D students were recruited from University of Balochistan and BSN students were taken from Bolan nursing school Quetta and Provincial nursing school at Civil Hospital Quetta.614 students responded back.

## Instruments

Self-reporting questionnaire SRQ-20, a 20-item questionnaire, designed by

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WHO, was used to determine medical student's health profile". Demographic information such as age, marital status, family monthly income, pocket money was also obtained. These questions were answered in the present study considering the past 30 days. Each response was recorded as 'Yes' and 'No'. Every yes answer indicates the presence of symptom while no for the absence of symptom. A cut-off level of <7 was considered as good mental health while ;;;, 7 was regarded as poor mental health.

**Procedure**

The permission to conduct research was approved by the Director General Health Balochistan, Principal Bolan Medical College, Principal Nursing School BMC and Faculty In charge of Pharmacy and Health Sciences UniversityofBalochistan.

Ethical Standards of Human Experimentation of the National Bioethics Committee were followed during the study and care was taken as notto violate any of the standard set forth by the committee. According to the standards, consent was taken in form of signature from participants prior to data collection and they were assured of their privacy and confidentiality.

Statistical analyses was performed by using SPSS version 2015. Descriptive statistics were used to demonstrate participant's demographic characteristics. Categorical variables were measured as percentages while continuous variables were expressed as mean

± standard deviation. Descriptive statistics (mean, standard deviation and percentage) were used to summarize data. Inferential statistics (Chi-square test, p<0.05) was used to assess the statistical significance among study variables.

**RESULTS**

A total of 800 questionnaires were distributed and 614 were received with a response rate of 76.7% as shown in Table 1. The gender distribution was dominated by female students with 351 (57.2%) females and 263 (42.8%) of males. Female domination was particularly because the all nursing students were female. Mean age of the study participants was 21.0 ±2.46 years with 32 (5.2%) married

and 579 (94%) were single. 288 (46.9%) participants were living in Quetta, 251 (40.9%) participants were from other cities ofBalochistan and 75 (12.2%) were from outside the Province i-e, Punjab and KPK etc. 265 (43.2%) subjects were from Doctor of Pharmacy Program 183 (29.8%) participants were from MBBS and 159 (25.6%) were Nursing students, 72 (27.2%) were studying in 3rd year. 339 (55.2%) guardians income was above 25,000 PKRs, 81 (13.2%) participants were not willing to tell their monthly income. 148 (24.1%) participant's family monthly income was 10,000-25,000 PKR (see table 1 for details).

41.7% (N=256) students have scored below the cut-off level and thus showed good mental health, whereas 58.3% (N=358) students scored above the cut-off level and thus they are indicative to have poor mental health.On one sample ttest, statisticalsignificance difference (p< 0.005) was found ( see Table 2).

Association between demographic characteristicsand mental health status was found significant on chi square except for gender; female gender was associated with poor mental health (see Table 3).

**Table 1**

Demographic characteristics of the study respondents

|  |  |  |
| --- | --- | --- |
| **Characters** | **Frequency N= 614** | **Percentage** |
| **Age (years)** |  |  |
| 18-20 | 319 | 52.0 |
| 21-23 | 196 | 31.9 |
| 24-26 | 84 | 13.7 |
| 27-28 | 06 | 1.0 |
| Above 28 | 09 | 1.5 |
| **Gender** |  |  |
| Male | 263 | 42.8 |
| Female | 351 | 57.2 |
| **Marital status** |  |  |
| Single | 579 | 94.3 |
| Married | 32 | 5.2 |
| **Study Program** |  |  |
| MBBS | 183 | 29.8 |
| BDS | 07 | I.I |
| Pharm-D | 265 | 43.2 |
| BSN | 159 | 25.9 |
| **Guardian's income** |  |  |
| Less than 5000 | II | 1.8 |
| 5,000-10,000 | 35 | 5.7 |
| 11,000-25,000 | 148 | 24.1 |
| 26,000 and above | 339 | 55.2 |
| **Guardian's income** |  |  |
| Less than 5000 | II | 1.8 |
| 5,000-10,000 | 35 | 5.7 |
| 11,000-25,000 | 148 | 24.1 |
| 26,000 and above | 339 | 55.2 |
| Not applicable | 81 | 13.2 |
| **Locality** |  |  |
| Belongs from Quetta | 288 | 46.9 |
| Belongs from outside Quena | 251 | 40.9 |
| Belongs from outside |  |  |
| Balochistan but from | 75 | 12.2 |
| Pakistan |  |  |

**Table 2**

Mental Health as per SRQ-20 on one sample t test

|  |  |  |  |
| --- | --- | --- | --- |
| **Mental Health Status** | **Frequency** | **Percentage** | **Pvalue** |
| Good | 256 | 41.7 |  |
| Poor | 358 | 58.3 | 0.001\* |

**Table 3**

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situation in Quetta and Balochistan was not maintained and terror

Association between Demographics and Mental health Statuson chi square

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Description** | **Frequency** | **Mental health status** | | **p-value** |
|  |  | **Poor** | **Good** |  |
| **Age (years)** |  |  |  |  |
| 18 20 | 319 | 185 | 134 |  |
| 21 -23 | 196 | 128 | 68 |  |
| 24-26 | 84 | 36 | 48 | 0.111 |
| 27 and above | 15 | 09 | 06 |  |
| **Gender** |  |  |  |  |
| Male | 263 | 139 | 124 | 0.015 |
| Female | 351 | 219 | 132 |  |
| **Marital Status** |  |  |  |  |
| Single | 579 |  |  |  |
| Married | 32 |  |  |  |
| **Study Program** |  |  |  |  |
| MBBS / BDS | 190 | 108 | 82 |  |
| Phann -D | 205 | 157 | 108 | 0.963 |
| BSN | 159 | 93 | 66 |  |
| **Guardian's Income** |  |  |  |  |
| Less thau 5,000 | II | 06 | 05 |  |
| 5,000 - I 0,000 | 35 | 17 | 18 | 0.439 |
| 11,000 -25,000 | 148 | 91 | 57 |  |
| 26,000 and above | 339 | 197 | 142 |  |
| ot mentioned | 81 | 47 | 34 |  |

### DISCUSSION

The study under consideration reveals that majority of medical students are having poor mental health. In the present study the prevalence of poor mental health is almost equal rather higher than the study conducted in Israel where 55.5% of students reported poor mental health status". Poor mental health's prevalence in pharmacy, MBBS, BOS and BSN students of Quetta is very high from the study done in Iran where 19.4% and 25% of medical students were having poor mental health". During medical, pharmacy or nursing school the students are exposed to demanding and heavy workloads. Study shows that these students are under considerable psychological strains'", and their mental health declines during the course of studies". The reason for poor mental health may be due to complex information to be learned, the large work load, academically stressful and competitive environment".

Female students are more prone to poor mental health". Present study also demonstrated female students had high ratio of poor mental health as compared with male medical students. Male medical students were at higher risk for suicide in this study. Prevalence of suicidal thoughts in male medical students is also found be highere".

This study demonstrated that all the students either of Quetta city, out of Quetta city or from other provinces equally report the poor mental health. The reason lies behind the fact that the peace

environment significantly affects the mental health".

Overall all health and medicine related students showed poor mental health. With such result future mental health of these professional health care students can be perceived. If mental health not considered to be treated properly, can cause very poor outcomes in terms of poor mental health care professionals".

### CONCLUSION AND RECOMMENDATIONS

This study presented very poor mental health profile of medical students in Quetta. Moreover, these findings may serve as a stimulus for future studies such as to identify the factors that may contribute to bring such level of poor mental health status of medical students.

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